

## ABSTRACT

A fiber laser includes in a resonator: a normal dispersion optical fiber; an anomalous dispersion optical fiber; a rare earth-doped optical fiber as a gain medium; and a mode locking mechanism, in which at least the rare earth-doped optical fiber is included as the normal dispersion optical fiber, and a length of the rare earth-doped optical fiber is set shorter than that of the anomalous dispersion optical fiber.